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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,436	09/28/2004	Peter-Michael Merbach	20822/0205180-US0	7460
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DARBY & DARBY P.C. P.O. BOX 770 Church Street Station New York, NY 10008-0770			EXAMINER CARTER, AARON W	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 09/21/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/509,436

Applicant(s)

MERBACH ET AL

Examiner

Aaron W. Carter

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 21-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-42 is/are allowed.
- 6) ☒ Claim(s) 21, 22, 25 and 27-29 is/are rejected.
- 7) ☒ Claim(s) 23, 24, 26, 30 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/28/04
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28 recites the limitation "the partial images of different wavelengths" in line 3.

There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 21, 22, 25, 27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 6,377,700 to Mack et al. ("Mack").

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As to claim 21, Mack discloses a method for detecting data of an uneven surface of an object, the method comprising:

Illuminating at least one of stripes and a grid on the uneven surface using at least one light source (*column 4, lines 11-20*);

Detecting, without a touching contact, light reflected from the uneven surface at a plurality of discrete locations so as to create a partial image of the uneven surface at each of the plurality of discrete locations (*column 3, lines 5-7 and column 4, lines 50-66, wherein the face corresponds to an uneven surface and each of the left and right images corresponds to a discrete locations*);

Selectively analyzing each of the partial images (*Fig. 11, column 16, lines 6-45 and column 22, lines 9-31, wherein corresponding points in each image are located, which corresponds to selectively analyzing*); and

Combining at least portions of the partial images into an overall image of the uneven surface (*Fig. 11, column 16, lines 6-45 and column 22, lines 9-31, wherein corresponding points in each image are located and combined to create a 3D model*).

As to claim 22, Mack discloses the method as recited in claim 21, wherein the object includes at least one of a face and a finger, and wherein the data includes biometric data (*column 3, lines 5-32, wherein coordinates corresponds to biometric data*).

As to claim 25, Mack discloses the method as recited in claim 21, wherein the detecting is performed using a plurality of cameras and the combining into an overall image includes

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combining only selected illuminated areas of each of the plurality of partial images (*column 4, lines 50-66*).

As to claim 27, Mack discloses the method as recited in claim 21, wherein the selectively analyzing is performed using different wavelengths (*column 5, lines 16-48*).

As to claim 29, Mack discloses the method as recited in claim 27, wherein the illuminating is performed using light of different wavelengths (*column 5, lines 16-48*).

***Allowable Subject Matter***

3. Claims 32-42 allowed.

The following is an examiner's statement of reasons for allowance:

4. As to claim 32, none of the prior art teach or fairly suggests the limitations "the electronic camera configured to assign a partial image corresponding to each of the plurality of light sources and to process the partial images into an overall image", in combination with the other limitations of the claim. The prior art of USPN 6,525,331 to Ngoi et al. discloses an arrangement for touchless detection of data of an uneven surface of an object comprising an imaging system and a plurality of line-shaped light sources for illuminating the uneven surface disposed in row on each side of the imaging system (*column 3, lines 58-62 and column 5, line 57*

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– column 6, line 10). However, Ngoi et al. does not teach or fairly suggest processing the partial images into an overall image, as disclosed in the limitations of claim 32.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

5. Claims 23, 24, 26, 30 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. Claim 28 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 2004/0228519 to Littlefield et al. discloses projecting a pattern on to a 3D object.

US 2004/0179728 to Littlefield et al. discloses projecting a pattern on to a 3D object.

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8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron W. Carter whose telephone number is (571) 272-7445.

The examiner can normally be reached on 8am - 4:30 am (Mon. - Fri.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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AU 2624